

# Dell™ OptiPlex™ FX160

## Setup and Quick Reference Guide

This guide provides an overview of features, specifications, quick setup, software, and troubleshooting information for your computer. For more information about your operating system, devices, and technologies, see the *Dell Technology Guide* at [support.dell.com](http://support.dell.com).

Model DC01T

# Notes, Notices, and Cautions

-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer.
-  **NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
-  **CAUTION:** A CAUTION indicates a potential for property damage, personal injury, or death.

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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**Model DC01T**

**August 2008**

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**Rev. A00**

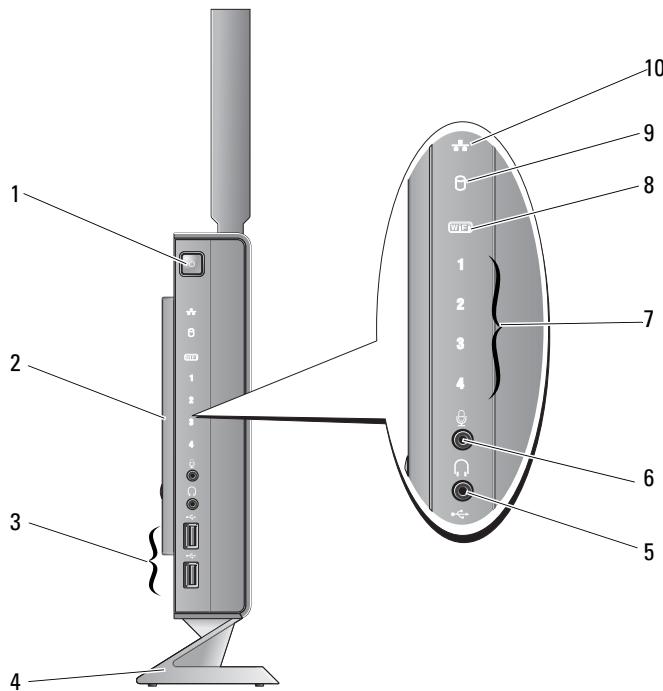
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# About Your Computer

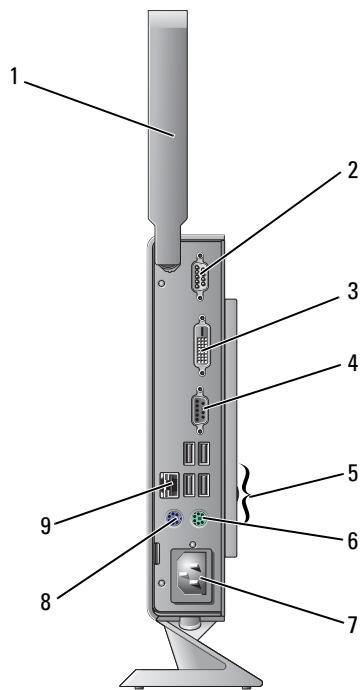
## Front View



|   |                        |   |                      |
|---|------------------------|---|----------------------|
| 1 | power button           | 2 | side cover           |
| 3 | USB 2.0 connectors (2) | 4 | stand                |
| 5 | headphone connector    | 6 | microphone connector |

|   |  |    |                            |
|---|--|----|----------------------------|
| 7 | diagnostic lights (see your<br><i>Service Manual</i> for information<br>about light codes) | 8  | Wi-Fi indicator            |
| 9 | hard drive indicator   | 10 | network activity indicator |

## Back View



|   |                             |   |                         |
|---|-----------------------------|---|-------------------------|
| 1 | wireless antenna (optional) | 2 | serial connector        |
| 3 | DVI connector               | 4 | VGA connector           |
| 5 | USB 2.0 connectors (4)      | 6 | PS/2 keyboard connector |
| 7 | power connector             | 8 | PS/2 mouse connector    |
| 9 | network connector (RJ-45)   |   |                         |

# Setting Up Your Computer

## Before Setting Up Your Computer

When positioning your computer, ensure that you allow easy access to a power source, adequate ventilation, and a level surface on which to place your computer.



**NOTICE:** Keep the computer on the stand and in the vertical position. Setting up the computer horizontally (on its side) restricts airflow and can impact performance.

Restricting airflow around the computer may cause it to overheat. To prevent overheating ensure that you leave at least 10.2 cm (4 in) at the back of the computer and a minimum of 5.1 cm (2 in) on all other sides. You should never put your computer in an enclosed space, such as a cabinet or drawer when it is powered on.

## Quick Setup

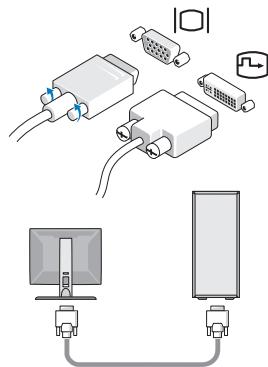


**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions that shipped with your computer.

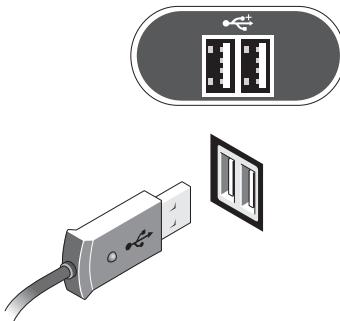


**NOTE:** Some devices may not be included if you did not order them.

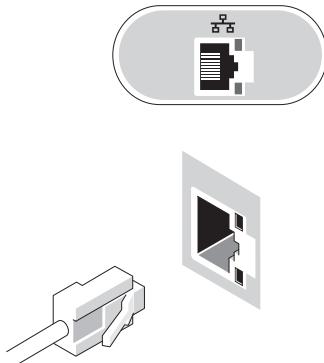
- 1 Connect the monitor using either the white DVI cable or the blue VGA cable.



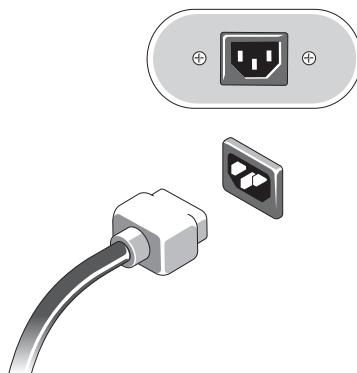
- 2 Connect a USB device, such as a keyboard or mouse.



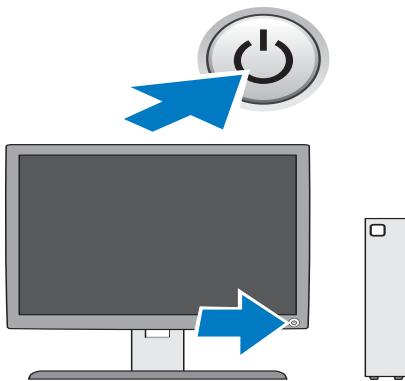
**3** Connect the network cable.



**4** Connect the power cable.



**5** Press the power buttons on the monitor and the computer.



# 3

## Specifications



**NOTE:** Offerings may vary by region. For more information regarding the configuration of your computer, click **Start→Help and Support** and select the option to view information about your computer.

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### Processor

---

|                    |  |
|--------------------|--|
| Processor type     | Intel® Atom™ 200 Series Single-Core processor or Intel Atom 300 Series Dual-Core processor |
| Level 2 (L2) cache | at least 512 KB pipelined-burst per core, eight-way set associative, writeback SRAM        |

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### System Information

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|                  |  |
|------------------|--|
| Chipset          | SiS M671 and SiS 968   |
| DMA channels     | seven  |
| Interrupt levels | 24   |
| BIOS chip (ROM)  | 8 Mb   |
| NIC              | integrated network interface capable of 10/100/1000 Mbps communication |

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### Memory

---

|  |  |
|--|--|
| Type   | 667-MHz or 800-MHz DDR2 SDRAM                                      |
| <b>NOTE:</b> When 800 MHz memory is installed, the computer still operates at 667 MHz. |  |
| Memory connectors  | two DIMMs  |
| Memory capacities  | 512 MB, 1 GB, and 2 GB modules (512 MB modules supported on Linux) |

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### **Memory (*continued*)**

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|                |                         |
|----------------|-------------------------|
| Minimum memory | 1 GB (512 MB for Linux) |
| Maximum memory | 4 GB                    |

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### **Video**

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Type:

|                             |  |
|-----------------------------|--|
| SiS Mirage integrated video | default 128 MB shared video memory (can be changed in BIOS system setup) |
|-----------------------------|--|

---

### **Audio**

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Type:

|                               |
|-------------------------------|
| ADI 1984A Integrated HD Audio |
|-------------------------------|

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### **Drives**

---

|  |  |
|--|--|
| Internally accessible  | one 2.5-in drive bay                                   |
| Available devices  | one 2.5-in SATA hard drive                             |
| <b>NOTE:</b> A hard drive is optional and requires a hard drive kit. |  |
|  | one NVRAM Flash module (for embedded operating system) |

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### **Connectors**

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External connectors:

|                 |   |
|-----------------|---|
| Video           | 15-pin VGA connector and 24-pin DVI connector                     |
| Network adapter | RJ-45 connector   |
| USB             | two front-panel, and four back-panel USB 2.0-compliant connectors |
| Audio           | two jacks (headphone and microphone)                              |
| Serial          | one 9-pin connector   |
| PS/2            | two 6-pin mini-DINs   |

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## **Connectors (*continued*)**

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System board connectors:

|                             |                        |
|-----------------------------|------------------------|
| Serial ATA (hard drive)     | one 7-pin connector    |
| Serial ATA (NVRAM module)   | one 22-pin connector   |
| Fan                         | one 5-pin connector    |
| Mini-PCI Express X1         | one 52-pin connector   |
| Front panel LED             | one 14-pin connector   |
| Front panel USB             | two 10-pin connectors  |
| Front panel audio           | one 12-pin connector   |
| Memory                      | two 240-pin connectors |
| Power 12 V                  | one 4-pin connector    |
| BIOS ROM                    | one 8-pin socket       |
| Serial ATA hard drive power | one 4-pin connector    |

---

## **Controls and Lights**

---

Front of computer:

|                                       |  |
|---------------------------------------|--|
| Power button                          | push button  |
| Power light (within the power button) | blue light — Blinking blue in sleep state; solid blue for power on state.<br><br>amber light — A solid amber light when the computer does not start indicates that the system board cannot start initialization. This could be a system board or a power supply problem (see "Power Problems" on page 17). |
| Network link light                    | blue light - A solid blue light indicates network connectivity.  |
| Wireless light                        | blue light - A solid blue light indicates the wireless network is powered on.  |
| Diagnostic lights (1–4)               | See your <i>Service Manual</i> for information about diagnostic light codes.   |

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### **Controls and Lights (*continued*)**

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|   |   |
|---|---|
| Drive activity light                                  | blue light — A blinking blue light indicates the computer is reading data from or writing data to the SATA hard drive.  |
| Rear of computer:                                     |   |
| Link integrity light (on network adapter connector)   | green light — 10-Mb operation<br>orange light — 100-MB operation<br>yellow light — 1-Gb operation<br>off (no light) — The computer is not detecting a physical connection to the network. |
| Network activity light (on network adapter connector) | yellow blinking light   |

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### **Power**

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DC power supply:

|  |                              |
|--|------------------------------|
| Wattage  | 50 W                         |
| Voltage (see the safety information that shipped with your computer for important voltage setting information) | 100-240 V, ~0.8 A, 50-60 Hz  |
| Coin-cell battery  | 3-V CR2032 lithium coin cell |

---

### **Physical**

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|        |   |
|--------|---|
| Height | 22.9 cm (9.02 in) without stand<br>26.9 cm (10.6 in) with stand         |
| Width  | 5.4 cm (2.13 in) with side cover<br>4.7 cm (1.85 in) without side cover |
| Depth  | 25.2 cm (9.92 in)   |
| Weight | 1.81–2.09 kg(4.0–4.6 lb)  |

**NOTE:** Weight varies, depending on configuration and if the stand is included.

---

## **Environmental**

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Temperature:

|           |                                |
|-----------|--------------------------------|
| Operating | 10° to 35° C (50° to 95° F)    |
| Storage   | -40° to 65° C (-40° to 149° F) |

Relative humidity

20% to 80% (noncondensing)

Maximum vibration:

|           |   |
|-----------|---|
| Operating | 5 to 350 Hz at 0.0002 G <sup>2</sup> /Hz        |
| Storage   | 5 to 500 Hz at 0.001 to 0.01 G <sup>2</sup> /Hz |

Maximum shock:

|           |  |
|-----------|--|
| Operating | 40 G +/- 5% with pulse duration of 2 msec +/- 10%<br>(equivalent to 20 in/sec [51 cm/sec])   |
| Storage   | 105 G +/- 5% with pulse duration of 2 msec +/- 10%<br>(equivalent to 50 in/sec [127 cm/sec]) |

Altitude:

|           |                                      |
|-----------|--------------------------------------|
| Operating | -15.2 to 3048 m (-50 to 10,000 ft)   |
| Storage   | -15.2 to 10,668 m (-50 to 35,000 ft) |

Airborne contaminant level

G2 or lower as defined by ISA-S71.04-1985



# Troubleshooting Tips



**CAUTION:** Always unplug your computer from the electrical outlet before opening the cover.



**NOTE:** For detailed troubleshooting information, including responding to system messages, see your *Service Manual* at [support.dell.com](http://support.dell.com).

## Using the Hardware Troubleshooter

- 1 Click Start (Microsoft® Windows® XP embedded) or the Windows Vista® Start button , and click Help and Support.
- 2 Type hardware troubleshooter in the search field and press <Enter> to start the search.
- 3 In the search results, select the option that best describes your problem and follow the remaining troubleshooting steps.

## Tips

- If a device does not work, ensure that the device is properly connected.
- Check the diagnostics lights on the front of the computer or listen for beep codes that may indicate a problem. See your *Service Manual* for more information.
- If you added or removed a part before the problem started, review the installation procedures and ensure that the part is correctly installed.
- If an error message appears on the screen, write down the exact message. This message may help support personnel to diagnose and fix the problem(s).
- If an error message occurs in a program, see the program documentation.

## Power Problems



**CAUTION:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

**IF THE POWER LIGHT IS OFF —** The computer is either turned off or is not receiving power.

- Reseat the power cable in the power connector on the back of the computer and the electrical outlet.
- Bypass power strips, power extension cables, and other power protection devices to verify that the computer turns on properly.
- Ensure that any power strips being used are plugged into an electrical outlet and are turned on.
- Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

**IF THE POWER LIGHT IS BLUE AND THE COMPUTER IS NOT RESPONDING —**

- Ensure that the display is connected and powered on.
- If the display is connected and powered on, see your *Service Manual* on [support.dell.com](http://support.dell.com).

**IF THE POWER LIGHT IS BLINKING BLUE —** The computer is in standby mode. Press a key on the keyboard, move the mouse, or press the power button to resume normal operation.

**IF THE POWER LIGHT IS STEADY AMBER —** There is a power problem, or a device may be malfunctioning or incorrectly installed.

**ELIMINATE INTERFERENCE —** Some possible causes of interference are:

- Power, keyboard, and mouse extension cables
- Too many devices connected to the same power strip
- Multiple power strips connected to the same electrical outlet

## Memory Problems

 **CAUTION:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

**IF YOU RECEIVE AN INSUFFICIENT MEMORY MESSAGE —**

- Save and close any open files and exit any open programs you are not using to see if that resolves the problem.
- See the software documentation for minimum memory requirements. If necessary, install additional memory.

- Reseat the memory modules to ensure that your computer is successfully communicating with the memory.
- Run the Dell Diagnostics (see "Dell Diagnostics" on page 21).

#### **IF YOU EXPERIENCE OTHER MEMORY PROBLEMS —**

- Reseat the memory modules to ensure that your computer is successfully communicating with the memory.
- Ensure that you are following the memory installation guidelines.
- Ensure that the memory you are using is supported by your computer. For more information about the type of memory supported by your computer, see "Specifications" on page 11.
- Run the Dell Diagnostics (see "Dell Diagnostics" on page 21).

### **Lockups and Software Problems**



**NOTE:** The procedures in this document were written for the Windows default view and may not apply if you set your Dell computer to the Windows Classic view.

#### **The computer does not start up**

**ENSURE THAT THE POWER CABLE IS FIRMLY CONNECTED TO THE COMPUTER AND TO THE ELECTRICAL OUTLET**

#### **A program stops responding**

##### **END THE PROGRAM —**

- 1 Press <Ctrl><Shift><Esc> simultaneously to access the Task Manager, and click the Applications tab.
- 2 Click to select the program that is no longer responding, and click End Task.

#### **A program crashes repeatedly**



**NOTE:** Most software includes installation instructions in its documentation or on a floppy disk, CD, or DVD.

**CHECK THE SOFTWARE DOCUMENTATION —** If necessary, uninstall and then reinstall the program.

## **A program is designed for an earlier Microsoft Windows operating system**

### **RUN THE PROGRAM COMPATIBILITY WIZARD —**

- 1** Click Start →Control Panel→Programs→Use an older program with this version of Windows.
- 2** In the welcome screen, click Next.
- 3** Follow the instructions on the screen.

## **A solid blue screen appears**

**TURN THE COMPUTER OFF —** If you are unable to get a response by pressing a key on your keyboard or moving your mouse, press and hold the power button for at least 6 seconds (until the computer turns off), and then restart your computer.

## **Other software problems**

### **CHECK THE SOFTWARE DOCUMENTATION OR CONTACT THE SOFTWARE MANUFACTURER FOR TROUBLESHOOTING INFORMATION —**

- Ensure that the program is compatible with the operating system installed on your computer.
- Ensure that your computer meets the minimum hardware requirements needed to run the software. See the software documentation for information.
- Ensure that the program is installed and configured properly.
- Verify that the device drivers do not conflict with the program.
- If necessary, uninstall and then reinstall the program.

## **Dell Technical Update Service**

The Dell Technical Update service provides proactive e-mail notification of software and hardware updates for your computer. To enroll for the Dell Technical Update service, go to [support.dell.com/technicalupdate](http://support.dell.com/technicalupdate).

## **Dell Support Utility**

 **NOTE:** The Dell Support Utility is not supported on Linux or Windows XP embedded operating systems.

The Dell Support Utility provides self-support information, software updates, and health scans of your computing environment. Access the Dell Support Utility from the  icon on the taskbar, or from the **Start** menu.

If the Dell Support icon does not appear in your taskbar:

- 1 Click Start →All Programs→Dell Support→Dell Support Settings.
- 2 Ensure that the Show icon on the taskbar option is checked.

 **NOTE:** If the Dell Support Utility is not available from the **Start** menu, go to [support.dell.com](http://support.dell.com) and download the software.

For more information about the Dell Support Utility, click the question mark (?) at the top of the **Dell Support** screen.

## Dell Diagnostics

 **NOTE:** Dell Diagnostics is supported only on operating systems installed on the hard drive and Windows XP Embedded running on an NVRAM Flash module.

### Starting the Dell Diagnostics (installed on the computer)

- 1 Ensure that the computer is connected to a working electrical outlet.
- 2 Turn on (or restart) your computer.
- 3 When the DELL logo appears, press <F12> immediately. Select **Boot to Utility Partition** and press <Enter>.

 **NOTE:** If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop, and then shut down your computer and try again.

 **NOTE:** If you see a message stating that no diagnostics utility partition has been found, run the Dell Diagnostics from the *Drivers and Utilities* media.

- 4 Press any key to start the Dell Diagnostics from the diagnostics utility partition on your hard drive, and follow the instructions on the screen.

### Starting the Dell Diagnostics From the Dell *Drivers and Utilities* Media

 **NOTE:** The Dell *Drivers and Utilities* media is optional and may not ship with your computer. This procedure also requires an external optical drive.

- 1 Connect an external optical drive to the computer.
- 2 Insert the *Drivers and Utilities* media.

- 3 Shut down and restart the computer.

When the DELL logo appears, press <F12> immediately.



**NOTE:** If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop; then, shut down your computer and try again.



**NOTE:** The next steps change the boot sequence for one time only. On the next start up, the computer starts according to the devices specified in the system setup program.

- 4 When the boot device list appears, highlight **CD/DVD/CD-RW** and press <Enter>.
- 5 Select **Boot from CD-ROM** from the menu that appears and press <Enter>.
- 6 Type 1 to start the CD menu and press <Enter> to proceed.
- 7 Select **Run the 32 Bit Dell Diagnostics** from the numbered list. If multiple versions are listed, select the version that is appropriate for your computer.
- 8 When the Dell Diagnostics **Main Menu** appears, select the test that you want to run, and follow the instructions on the screen.

# 5

## Reinstalling Software

### Drivers

#### Identifying Drivers

##### Windows Vista®

- 1 Locate the list of devices for your computer:
  - a Click the Windows Vista Start button , and right-click Computer.
  - b Click Properties→Device Manager.

 **NOTE:** The User Account Control window may appear. If you are an administrator on the computer, click Continue; otherwise, contact your administrator to continue.
- 2 Scroll down the list to see if any device has an exclamation point (a yellow circle with a [!]) on the device icon.  
If an exclamation point is next to the device name, you may need to reinstall the driver or install a new driver (see "Reinstalling Drivers and Utilities" on page 24).

##### Windows® XP Embedded

- 1 Locate the list of devices for your computer:
  - a Right-click My Computer on the desktop.
  - b Click Properties.

 **NOTE:** The User Account Control window may appear. If you are an administrator on the computer, click Continue; otherwise, contact your administrator to continue.
- c Click the Hardware tab, and then click Device Manager.

**2** Scroll down the list to see if any device has an exclamation point (a yellow circle with a [!] ) on the device icon.

If an exclamation point is next to the device name, you may need to reinstall the driver or install a new driver (see "Reinstalling Drivers and Utilities" on page 24).

## Reinstalling Drivers and Utilities



**NOTICE:** The Dell Support website at [support.dell.com](http://support.dell.com) provides approved drivers for your computer. If you install drivers obtained from other sources, your computer might not work correctly.

### Returning to a Previous Device Driver Version

#### Windows Vista

- 1** Click the Windows Vista Start button , and right-click **Computer**.
- 2** Click **Properties**→**Device Manager**.  
 **NOTE:** The User Account Control window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to enter the Device Manager.
- 3** Right-click the device for which the new driver was installed and click **Properties**.
- 4** Click the **Drivers** tab→**Roll Back Driver**.

If Device Driver Rollback does not resolve the problem, use System Restore (see "Restoring Your Operating System" on page 26) to return your computer to the operating state that existed before you installed the new driver.

#### Windows XP Embedded

- 1** Locate the list of devices for your computer:
  - a** Right-click **My Computer** on the desktop.
  - b** Click **Properties**.  
 **NOTE:** The User Account Control window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue.
- c** Click the **Hardware** tab, and then click **Device Manager**.

**2** Right-click the device for which the new driver was installed and click **Properties**.

**3** Click the **Drivers** tab→**Roll Back Driver**.

If Device Driver Rollback does not resolve the problem, use System Restore (see "Restoring Your Operating System" on page 26) to return your computer to the operating state that existed before you installed the new driver.

## **Manually Reinstalling Drivers**

### **Windows Vista**

**1** Click the Windows Vista Start button , and right-click **Computer**.

**2** Click **Properties**→**Device Manager**.



**NOTE:** The User Account Control window appears. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue.

**3** Double-click the type of device for which you are installing the driver (for example, **Audio** or **Video**).

**4** Double-click the name of the device for which you are installing the driver.

**5** Click the **Driver** tab→**Update Driver**→**Browse my computer for driver software**.

**6** Click **Browse** and browse to the location to which you previously copied the driver files.

**7** Click the name of the driver→**OK**→**Next**.

**8** Click **Finish** and restart your computer.

### **Windows XP Embedded**

**1** Locate the list of devices for your computer:

**a** Right-click **My Computer** on the desktop.

**b** Click **Properties**.



**NOTE:** The User Account Control window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue.

**c** Click the **Hardware** tab, and then click **Device Manager**.

- 2** Right-click the device for which you need a driver, and click **Update Driver**.
- 3** Click the **Drivers** tab→**Update Driver**.
- 4** Follow the instructions that appear on the screen to either install the driver from a local source, or to search the Web for a driver.

## Restoring Your Operating System

Depending on your system configuration, you can restore your operating system in the following ways:

- Microsoft® Windows System Restore (available only on computers that have hard drives and are running Windows Vista) returns your computer to an earlier operating state without affecting data files. Use System Restore as the first solution for restoring your operating system and preserving data files.
- If you received the *Operating System* media with your computer, you can use it to restore your operating system. However, using the *Operating System* media deletes all data on the hard drive. This option — available only on computers with hard drives with Windows Vista — also requires an external optical drive to run the media.

### Using Microsoft Windows System Restore (Windows Vista hard drive operating systems only)



**NOTE:** The procedures in this document were written for the Windows default view and may not apply if you set your Dell computer to the Windows Classic view.

#### Starting System Restore

- 1** Click the Windows Vista Start button .
- 2** In the Start Search box, type **System Restore** and press <Enter>.

A small icon of a notepad with a pencil, indicating a note or important information.

**NOTE:** The User Account Control window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue the desired action.

- 3** Click **Next** and follow the remaining prompts on the screen.

## **Undoing the Last System Restore**

 **NOTICE:** Before you undo the last system restore, save and close all open files and exit any open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.

- 1** Click the Windows Vista Start button .
- 2** In the **Start Search** box, type **System Restore** and press <Enter>.
- 3** Click **Undo my last restoration** and click **Next**.



# 6

## Finding Information



**NOTE:** Some features or media may be optional and may not ship with your computer. Some features or media may not be available in certain countries.



**NOTE:** Additional information may ship with your computer.

| Document/Media/Label   | Contents   |
|--|--|
| Service Tag/Express Service Code<br><br>The Service Tag/Express Service Code is located on your computer.  | <ul style="list-style-type: none"><li>• Use the Service Tag to identify your computer when you use <a href="http://support.dell.com">support.dell.com</a> or contact support.</li><li>• Enter the Express Service Code to direct your call when contacting support</li></ul> |
| Safety, Regulatory, Warranty, and Support Documentation<br><br>This type of information may have shipped with your computer. For additional regulatory information, see the Regulatory Compliance Homepage on <a href="http://www.dell.com">www.dell.com</a> at the following location: <a href="http://www.dell.com/regulatory_compliance">www.dell.com/regulatory_compliance</a> . | <ul style="list-style-type: none"><li>• Warranty information</li><li>• Terms and Conditions (U.S. only)</li><li>• Safety instructions</li><li>• Regulatory information</li><li>• Ergonomics information</li><li>• End User License Agreement</li></ul>                       |
| Dell Technology Guide<br><br>The <i>Dell Technology Guide</i> is available at <a href="http://support.dell.com">support.dell.com</a> .   | <ul style="list-style-type: none"><li>• About your operating system</li><li>• Using and maintaining devices</li><li>• Understanding technologies such as RAID, the Internet, Bluetooth® wireless technology, e-mail, networking, and more.</li></ul>                         |
| Microsoft® Windows® License Label<br><br>Your Microsoft Windows License is located on your computer.   | <ul style="list-style-type: none"><li>• Provides your operating system product key.</li></ul>  |



# Getting Help

## Obtaining Assistance

 **CAUTION:** If you need to remove the computer cover, first disconnect the computer power and modem cables from all electrical outlets. Follow the safety instructions that shipped with your computer.

If you experience a problem with your computer, you can complete the following steps to diagnose and troubleshoot the problem:

- 1 See "Tips" on page 17 for information and procedures that pertain to the problem your computer is experiencing.
- 2 See "Dell Diagnostics" on page 21 for procedures on how to run Dell Diagnostics.
- 3 Fill out the "Diagnostics Checklist" on page 36.
- 4 Use Dell's extensive suite of online services available at Dell Support ([support.dell.com](http://support.dell.com)) for help with installation and troubleshooting procedures. See "Online Services" on page 32 for a more extensive list of Dell Support online.
- 5 If the preceding steps have not resolved the problem, see "Contacting Dell" on page 37.

 **NOTE:** Call Dell Support from a telephone at or near the affected computer so that the support staff can assist you with any necessary procedures.

 **NOTE:** Dell's Express Service Code system may not be available in all countries.

When prompted by Dell's automated telephone system, enter your Express Service Code to route the call directly to the proper support personnel. If you do not have an Express Service Code, open the **Dell Accessories** folder, double-click the **Express Service Code** icon, and follow the directions.

For instructions on using the Dell Support, see "Technical Support and Customer Service" on page 32.



**NOTE:** Some of the following services are not always available in all locations outside the continental U.S. Call your local Dell representative for information on availability.

## Technical Support and Customer Service

Dell's support service is available to answer your questions about Dell hardware. Our support staff uses computer-based diagnostics to provide fast, accurate answers.

To contact Dell's support service, see "Before You Call" on page 35, and then see the contact information for your region or go to [support.dell.com](http://support.dell.com).

### DellConnect™

DellConnect is a simple online access tool that allows a Dell service and support associate to access your computer through a broadband connection, diagnose your problem and repair it all under your supervision. For more information, go to [support.dell.com](http://support.dell.com) and click DellConnect.

## Online Services

You can learn about Dell products and services at the following websites:

[www.dell.com](http://www.dell.com)

[www.dell.com/ap](http://www.dell.com/ap) (Asian/Pacific countries only)

[www.dell.com/jp](http://www.dell.com/jp) (Japan only)

[www.euro.dell.com](http://www.euro.dell.com) (Europe only)

[www.dell.com/la](http://www.dell.com/la) (Latin American and Caribbean countries)

[www.dell.ca](http://www.dell.ca) (Canada only)

You can access Dell Support through the following websites and e-mail addresses:

- Dell Support websites:

[support.dell.com](http://support.dell.com)

[support.jp.dell.com](http://support.jp.dell.com) (Japan only)

[support.euro.dell.com](http://support.euro.dell.com) (Europe only)

- Dell Support e-mail addresses:  
[mobile\\_support@us.dell.com](mailto:mobile_support@us.dell.com)  
[support@us.dell.com](mailto:support@us.dell.com)  
[la-techsupport@dell.com](mailto:la-techsupport@dell.com) (Latin America and Caribbean countries only)  
[apsupport@dell.com](mailto:apsupport@dell.com) (Asian/Pacific countries only)
- Dell Marketing and Sales e-mail addresses:  
[apmarketing@dell.com](mailto:apmarketing@dell.com) (Asian/Pacific countries only)  
[sales\\_canada@dell.com](mailto:sales_canada@dell.com) (Canada only)
- Anonymous file transfer protocol (FTP):  
[ftp.dell.com](ftp://dell.com) – log in as user `anonymous`, and use your e-mail address as your password

## **AutoTech Service**

Dell's automated support service—AutoTech—provides recorded answers to the questions most frequently asked by Dell customers about their laptop and desktop computers.

When you call AutoTech, use your touch-tone telephone to select the subjects that correspond to your questions. For the telephone number to call for your region, see "Contacting Dell" on page 37.

## **Automated Order-Status Service**

To check on the status of any Dell products that you have ordered, you can go to [support.dell.com](http://support.dell.com), or you can call the automated order status service. A recording prompts you for the information needed to locate and report on your order. For the telephone number to call for your region, see "Contacting Dell" on page 37.

## **Problems With Your Order**

If you have a problem with your order, such as missing parts, wrong parts, or incorrect billing, contact Dell for customer assistance. Have your invoice or packing slip available when you call. For the telephone number to call for your region, see "Contacting Dell" on page 37.

## **Product Information**

If you need information about additional products available from Dell, or if you would like to place an order, visit the Dell website at [www.dell.com](http://www.dell.com). For the telephone number to call for your region or to speak to a sales specialist, see "Contacting Dell" on page 37.

## **Returning Items for Warranty Repair or Credit**

Prepare all items being returned, whether for repair or credit, as follows:

- 1** Call Dell to obtain a Return Material Authorization Number, and write it clearly and prominently on the outside of the box.

For the telephone number to call for your region, see "Contacting Dell" on page 37. Include a copy of the invoice and a letter describing the reason for the return.

- 2** Include a copy of the Diagnostics Checklist (see "Diagnostics Checklist" on page 36), indicating the tests that you have run and any error messages reported by the Dell Diagnostics (see "Contacting Dell" on page 37).
- 3** Include any accessories that belong with the item(s) being returned (power cables, software floppy disks, guides, and so on) if the return is for credit.
- 4** Pack the equipment to be returned in the original (or equivalent) packing materials.

You are responsible for paying shipping expenses. You are also responsible for insuring any product returned, and you assume the risk of loss during shipment to Dell. Collect On Delivery (C.O.D.) packages are not accepted.

Returns that are missing any of the preceding requirements will be refused at Dell's receiving dock and returned to you.

## Before You Call



**NOTE:** Have your Express Service Code ready when you call. The code helps Dell's automated support telephone system direct your call more efficiently. You may also be asked for your Service Tag (located on the back or bottom of your computer).

Remember to fill out the Diagnostics Checklist (see "Diagnostics Checklist" on page 36). If possible, turn on your computer before you call Dell for assistance and call from a telephone at or near the computer. You may be asked to type some commands at the keyboard, relay detailed information during operations, or try other troubleshooting steps possible only at the computer itself. Ensure that the computer documentation is available.



**CAUTION:** Before working inside your computer, follow the safety instructions in the documentation that shipped with your computer.

## **Diagnostics Checklist**

Name:

Date:

Address:

Phone number:

Service Tag (bar code on the back or bottom of the computer):

Express Service Code:

Return Material Authorization Number (if provided by Dell support technician):

Operating system and version:

Devices:

Expansion cards:

Are you connected to a network? Yes No

Network, version, and network adapter:

Programs and versions:

See your operating system documentation to determine the contents of the system's start-up files. If the computer is connected to a printer, print each file. Otherwise, record the contents of each file before calling Dell.

Error message, beep code, or diagnostic code:

Description of problem and troubleshooting procedures you performed:

## Contacting Dell

For customers in the United States, call 800-WWW-DELL (800-999-3355).



**NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

- 1** Visit [support.dell.com](http://support.dell.com), and verify your country or region in the **Choose A Country/Region** drop down menu at the bottom of the page.
- 2** Click **Contact Us** on the left side of the page, and select the appropriate service or support link based on your need.
- 3** Choose the method of contacting Dell that is convenient for you.



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